

**What is claimed is:**

1. A composition for cleaning and inhibiting corrosion and scale formation on the surfaces of processing equipment in contact with circulating water and/or chemicals, which comprises:
  - a) hydrochloric acid;
  - b) hydrofluoric acid;
  - c) at least one chelating agent;
  - d) a copper complexing agent; and
  - e) acridine orange.
2. The composition of claim 1, wherein the chelating agent is selected from the group consisting of ethylene diamine tetracetic acid (EDTA), citric acid and mixtures thereof.
3. The composition of claim 2, wherein the chelating agent is a mixture of about 2%, by weight, EDTA and about 2%, by weight, of citric acid.
4. The composition of claim 1, wherein the hydrochloric acid is about 8%, by weight, of the composition.
5. The composition of claim 1, wherein the hydrofluoric acid is about 1.5%, by weight, of the composition.
6. The composition of claim 1, wherein the concentration of acridine orange is about 50 to about 200 ppm.
7. The composition of claim 6, wherein the concentration of acridine orange is about 80 ppm.
8. The composition of claim 1, wherein the copper complexing agent is thiourea.
9. The composition of claim 8, wherein the concentration of thiourea is about 100 ppm.

10. The composition of claim 1, wherein the composition also includes 0.1 g/l of a neutral emulsifying agent.
11. A process for cleaning and inhibiting scale formation on the surfaces of process equipment which contacts circulating water and/or chemicals, which comprises:
- 5                   contacting the process equipment surfaces for a period of time, and at a temperature which is effective to effect cleaning and/or scale inhibition with a composition comprising:
- 10           a)    hydrochloric acid;
- b)    hydrofluoric acid;
- c)    at least one chelating agent;
- d)    a copper complexing agent; and
- e)    acridine orange.
- 15           12. The process of claim 11, wherein the chelating agent is selected from the group consisting of ethylene diamine tetracetic acid (EDTA), citric acid, and mixtures thereof.
13. The process of claim 12, wherein the chelating agent is a mixture of about 2%, by weight, of EDTA and about 2%, by weight, of citric acid.
- 20           14. The process of claim 11, wherein the hydrochloric acid is about 8%, by weight, of the composition.
15. The process of claim 11, wherein the hydrofluoric acid is about 1.5%, by weight, of the composition.
16. The process of claim 11, wherein the concentration of acridine orange is from
- 25           40 to about 200 ppm.

17. The process of claim 16, wherein the concentration of acridine orange is about 80 ppm.
18. The process of claim 11, wherein the copper complexing agent is thiourea.
19. The process of claim 18, wherein the concentration of thiourea is about 100 ppm.
20. The process of claim 11, wherein the process is conducted at a temperature of about 300°K and above.
21. The process of claim 11, wherein the process is conducted for a period of about 8 hours.
22. The process of claim 11, wherein the composition also includes 0.1 g/l of a neutral emulsifying agent.